

REPLACEMENT CLAIMS

D1 sub G1 45. (Amended) The integrated circuit of claim 68 wherein substantially all said additional dopants are displaced from said separated active regions by at least one hundred angstroms.

D2 sub G1 50. (Amended) The integrated circuit of claim 68 wherein said additional dopants establish a field threshold voltage.

Sub E1 51. (Amended) The integrated circuit of claim 68 wherein said additional dopants are implanted into the substrate below said first area filled with said first dielectric material to a depth in a range of about 10 to 100 percent the depth of said first area filled with said first dielectric material.

52. (Amended) The integrated circuit of claim 68 wherein said additional dopants are implanted into the substrate below said first area filled with said first dielectric material to a depth in a range of about 20 to 80 percent the depth of said first area filled with said first dielectric material.

D3 sub E2 68. (Amended) An integrated circuit comprising:
a semiconductor substrate including a first region of a predefined conductivity type;
a plurality of active regions provided within said first region;

D3
Sub
E2

a field isolation region separating at least two of said active regions, wherein said field isolation region includes an isolation trench, said isolation trench further including a first area filled with a first dielectric material forming at least sidewalls of said isolation trench, and a second area filled with a second dielectric material situated within said sidewalls, wherein said first dielectric material and said second dielectric material are different; and

a doped region within said first region below said second area, said doped region being of said predefined conductivity type and having a doping concentration higher than a doping concentration of said first region, wherein additional dopants in said doped region causing said higher doping concentration are displaced away from said separated active regions.

D4
sub G1

70. (Amended) The integrated circuit of claim 68 wherein said additional dopants from said doped region are displaced away from said separated active regions by a distance at least equal to a sidewall thickness of said first area.

D5
Sub
E3

73. (Amended) A memory device comprising:

a semiconductor substrate including a plurality of doped active regions; [and]

a field isolation region separating at least two of said active regions, said field isolation region including an isolation trench, said isolation trench further including a first area filled with a first dielectric material forming at least sidewalls of said isolation trench, and a second area filled with a second dielectric material situated within said sidewalls, said first dielectric material being different than said second dielectric material; and

an ion implanted region provided below said second area having an increased doping concentration in an area of said substrate between said separated active regions, wherein substantially all ions from said ion implanted region which increase said doping

Sub
E3
X

Application No.: 09/318,159

Docket No.: M4065.0335/P335-A

concentration are displaced away from said active regions by a distance at least equal to a sidewall thickness of said first area filled with said first dielectric material.
